MODIS sensor Working Group (MsWG) Meeting Summary Sept. 24, 2008

Attendance: Gary Toller, Gene Eplee, Bill Barnes, Aisheng Wu, Hongda Chen, Sergey Marchenko, Ben Ripman, Eric Vermote, Gerhard Meister, James Kuyper, Jack Xiong, Brian Wenny, Junqiang Sun, Vincent Salomonson

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Scheduled Agenda

Item 1: Recent L1B LUT delivery

- Terra forward update – 5.0.40.10 (09/15/08) – m1
- Aqua forward update – 5.0.35.5 (09/16/08) – m1/RVS

Item 2: Instrument status

- Terra and Aqua MODIS are in nominal operations.

Item 3: MCST recent activities

- Terra Band 27 SAA related increased noise
    - Brian discussed a recent increase in noise (NEdT) for the PV bands on the LWIR focal plane (B27-30). First observed on Sept 3, an increase in NEdT occurs in two or three consecutive orbits after spacecraft passage through the South Atlantic Anomaly. The NEdT increase lasts about a half hour before return to its prior stable value. This behavior has continued everyday but appears to be subsiding for the most recent data. The b1 values have remained stable and the noise level has not exceeded the NEdT specification for any good detector. The largest noise increase was observed for band 27. No change in QA status is needed at this time.
- Aqua Mirror Side Difference
    - Junqiang showed the Aqua band 8 MS ratio trending results at four AOI, which demonstrates that there was a already 0.2% MS difference early in the mission and a 0.3% increase in the last few months for Aqua band 8. The 0.2% MS difference from early in the mission is due to the RVS change in the period of time from prelaunch RVS measurements to launch. In the current Aqua L1B collection 5 RVS algorithms, this MS difference was not corrected. In Aqua L1B collection 6, the RVS algorithms have been modified to account for this effect and this 0.2% constant MS difference will be removed. For the recent 0.3% MS ratio increase, there are two possible reasons: 1) No lunar calibration for Aqua and therefore no RVS update in the last three months; 2) The MSR recent increase may also mean that the Aqua MODIS polarization property is starting to change. There will be an Aqua lunar calibration on October 10. If the increase is due to the first reason, the unexpected increase in the MS ratio should be removed when the updated RVS is applied. MS difference is also observed in other bands but smaller compared to band 8.
    - Gerhard showed the AOI averaged Aqua RSB MS ratio trending results. His results are consistent with the MCST results. He also showed the MS ratio for each individual detector. He found the MS difference is detector dependent, especially for edge detectors. Junqiang pointed out that the difference of the MS difference among the detectors of each band is less than 0.2%. In the current Aqua L1B collection 5, the RVS for RSB is detector independent. In L1B collection 6, detector dependent RVS will be applied and the observed difference in MS difference should disappear.
    - Jack requested MCST compare the updated RVS with the current RVS LUTs when the new Aqua lunar calibration on October 10 is done and see if the recent MS ratio increase in RSB is reduced. He also requested MCST to compare the detector RVS proposed for Aqua L1B collection 6 with the collection 5 RVS to see if the MS difference already existed in early mission is removed.

Compiled by J. Sun

Item 4: Around the Table

- Eric: Testing the SeaWIFS Terra MODIS polarization parameters and found the polarization phase angle in the SeaWIFS's polarization parameters had a 180 degree rotation.
  - Gerhard: You can use your definition for the phase angle.
  - Jack: We may need to have a small group meeting to discuss this issue in detail.

Next Meeting: ~October 8, 2008